REMARKS

I. INTRODUCTION

In response to the Office Action dated February 18, 2009, new claims 58 and 59 have been added. Claims 20-22, 44-46, and 48-59 are in the application. Entry of these amendments, and re-consideration of the application, as amended, is requested.

II. STATUS OF CLAIMS

Claims 20-22, 44-46 and 48-57 are pending in the application.

Claims 58 and 59 are newly added.

Claim 20 was rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent 6,701,528, and this rejection is being appealed.

Claims 20, 21, 44, 45, 48 and 50-52 were rejected under 35 U.S.C. §103(a) as being obvious in view of Ebisawa, U.S. Patent 6,263,504 (Ebisawa) and Artigalas et al., U.S. Patent 6,091,883 (Artigalas), and these rejections are being appealed.

Claims 22 and 46 were rejected under 35 U.S.C. §103(a) as being obvious in view of Ebisawa, Artigalas and Reynolds et al., U.S. Patent 6,934,963 (Reynolds).

Claims 49 and 53-57 were rejected under 35 U.S.C. §103(a) as being obvious in view of Ebisawa, Artigalas and Okura et al., U.S. Patent 6,487,722 (Okura).

III. DOUBLE PATENTING

A terminal disclaimer in compliance with 37 C.F.R. 1.321(c), (d) is attached.

IV. GROUNDS OF REJECTION TO BE REVIEWED

Whether claims 20, 21, 44, 45, 48 and 50-52 are patentable under 35 U.S.C. §103(a) over Ebisawa in view of Artigalas.

Whether claims 22 and 46 are patentable under 35 U.S.C. §103(a) over Ebisawa and Artigalas in view of Reynolds.

Whether claims 49 and 53-57 are patentable under 35 U.S.C. §103(a) over Ebisawa and Artigalas in view of Okura.

V. ARGUMENT

A. The References and the Subject Invention

1. The Ebisawa Reference

U.S. Patent No. 6,263,504, issued July 17, 2001 to Ebisawa discloses a data delivery system, data receiving apparatus, and storage medium for video programs. A data storage unit is provided in a receiving apparatus, whereby a video program can be provided with an instantaneous response equivalent to the VOD system. Namely, the data of the first part of the video data is stored in the data storage unit in advance. When there is a request for reproduction, that stored data is immediately reproduced. The data after the first data is sent from a transmitting apparatus in the same way as an NVOD system heretofore. Buffering is performed in the receiving apparatus, and the resultant data is reproduced continuous with the data of the first part.

2. The Artigalas Reference

U.S. Patent No.6,091,883, issued July 18, 2000 to Artigalas et al. discloses a method and device for recording and reading on a large-capacity medium. The disclosure relates to a recording and reading apparatus constituting a kind of video reservoir in the home of the consumer. Thanks to a large-capacity storing technique with suitable technical device, broadcasters transmit numerous programs via specific channels and the consumer may control the content of his reservoir (by recording, reading and erasing programs). The invention is applicable to on-demand video in the consumer's home with a video reservoir constituting a video-library that is regularly updated by broadcasters and/or by the consumer himself.

3. The Reynolds Reference

U.S. Patent No. 6,934,963, issued August 23, 2005 to Reynolds et al. discloses an interactive television program guide with passive content. A hybrid passive-interactive program guide is generated by combining the features of an interactive program guide with the passive video portion of a passive program guide. The interactive guide may replace passive listings with interactive listings, replace passive features with interactive features, provide supplemental advertisements, or replace passive tagging information with interactive tagging information. Users may be provided with an opportunity to purchase a program or product being advertised, to view listings for segments aired in the video portion of the passive guide, to schedule reminders for listings or video

segments that are displayed by the passive guide, or to schedule video segments and related information for recording.

4. The Okura Reference

U.S. Patent No. 6,487,722, issued November 26, 2002 to Okura et al. disclose an EPG transmitting apparatus and method, EPG receiving apparatus and method, EPG transmitting/receiving system and method, and provider. The broadcast hour and the title of a program is displayed in an EPG (Electronic Program Guide). If the charge of the program is lower than the other corresponding programs, a symbol "Discount" is also displayed. If the program is the last one of NVOD (Near Video On Demand) programs, a symbol "Last" is also displayed.

B. Claims 20, 21, 44, 45, 48 and 5-52 are patentable under 35 U.S.C. §103(a) over Ebisawa in view of Artigalas

In paragraph 6, the Office Action rejected claims 20, 21, 44, 45, 48 and 50-52 under 35 U.S.C. §103(a) as unpatentable over Ebisawa, U.S. Patent 6,263,504 (Ebisawa) in view of Artigalas et al., U.S. Patent 6,091,883 (Artigalas). The Applicants respectfully traverse this rejection.

With Respect to Claims 20-21: Claim 20 recites:

> *A method of storing a video program in response to a user demand, wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission separated in time from a preceding transmission of the video program by a retransmission interval and being transmitted on a different channel than the previous transmission, the method comprising the steps of:*
>
> *selecting at least one of a plurality of video programs; and*
>
> *receiving a plurality of time segments of the selected video program in parallel, wherein each of the time segments is received on a different one of the channels.*

Ebisawa is said to disclose a method of storing a video program in response to a user demand (col. 6, lines 12-34), wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission separated in time from a preceding transmission of the video program by a retransmission interval and being transmitted on a different channel than the previous transmission, and selecting at least one of a plurality of video programs.

The Office Action acknowledges that Ebisawa does not teach the process of receiving the time segments in parallel, but alleges that Artigalas discloses this feature as follows:

> device including:
>
> means of reception frequency selection enabling reception of one or more broadcasting channels simultaneously; [10]

and

> the device of FIG. 1.
>
> The device of the invention can be incorporated in a television decoder or in a television receiver. As shown in FIG. **1**, the device of the invention includes means of frequency selection **1** able to provide signals from one or more channels in parallel, the channels being picked up by an antenna **2** in the case of an air or satellite broadcast or received via a cable network. Said means of frequency selection **1** can includes one or more analog and/or digital "tuners", in order to provide several channels of programs in parallel. The signals output by said means of frequency selection **1** are processed by means of digital encoding **3** which convert, if need be, the analog signals into digital signals and possibly assure the digital compression and/or multiplexing of the received signals. The encoded digital signals are then fed to the means of recording and reading **4** to be recorded on a large-capacity recording medium **4***a*. Means of control **5** along with a user interface module **6** (in the form of buttons integrated in the device or a remote controller) enable the user to control the means of frequency selection **1** and the means of recording and reading **4**.
>
> As indicated previously, the means of recording and reading **4** can use the matrix-head magnetic recording technique or the techniques of digital video cassettes (in which case the means of digital encoding **3** also assure the multiplexing if two or more channels are to be recorded in parallel on the recording medium **4***a*).

However, while the foregoing discloses the reception of more than one channel in parallel, it also teaches that *different* programs are transmitted (and recorded) on each of the channels. This is to allow the viewer to record different TV programs at the same time:

> A problem arises when the viewer is interested in several programs broadcast at the same time or when several members of his family with different tastes share the same TV set. To resolve this problem, one solution would be simply to acquire more TVs and VCRs, but this solution is costly and the correction and use of several recorders in parallel can be problematic.
>
> A viewer may also wish to record a number of TV programs when he is not watching the television (during the day when he is at work or during the night). The present solution is to program the video recorder to record sequentially in time a number of programs selected in advance. However, a problem arises if the programs are not broadcast at the time announced; there is also the problem of the limited recording capacity (a few hours at most) of present video cassettes. These constraints seriously limit the freedom of the user to record programs of interest.

(col. 1, lines 21-27)

> The recording and reading functions are advantageously independent of each other, in order to allow reading of one or more recorded programs while recording other programs. The consumer is then able to update the content of his video and/or audio reservoir at any time.
>
> The method preferably enables programs designated by the user to be locked, so that they can not be erased. In this way the user can build up a personal collection of protected recordings. To delete one of the recordings, the user must first unlock it, then erase it from the recording medium.
>
> Advantageously, the method enables simultaneous recording and/or reading of several programs in order to

(col. 2, lines 55 et seq.)

The Office Action argues that it would have been obvious for one of ordinary skill in the art to combine Ebisawa and Artigalas for the benefit of providing the user with a more minimal waiting time and to be able to provide playback functions. The Applicants disagree for the reasons described below.

1. One of Ordinary Skill in the Art Would Not Combine Ebisawa and Artigalas as Suggested

The Applicants respectfully disagree that one of ordinary skill in the art would combine Ebisawa and Artigalas as suggested. Both are directed to the notion of how to provide video programs to users so that they can be played back on demand. Both recognize that bandwidth requirements make it difficult to do so, and each reference offers an entirely different solution than the other.

Ebisawa teaches that immediate access to a media program be provided by pre-storing the initial portion of the media program, then downloading the remainder while the initial portion is being played back. In this way, transmission and storage requirements are reduced. Artigalas teaches that a plurality of media programs, in their entirety, be transmitted on different channels and downloaded in advance. Artigalas requires no more transmission bandwidth, because the programs are transmitted on different channels for real-time viewers anyway. However, Artigalas requires substantial storage capability. Ebisawa requires a substantial amount of transmission bandwidth, but less storage. Accordingly, Artigalas and Ebisawa offer *different* solutions to the same problem, and teach away from any such combination.

"A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. The degree of teaching away

will of course depend on the particular facts; in general, a reference's disclosure will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the Applicant. *In re Gurley*, 27 F.3d 551, 553, 31 U.S.P.Q.2d 1130 (Fed. Cir. 1994).

The Final Office Action disagrees, stating:

> The examiner respectfully disagrees. Ebisawa and Artigalas both transmit and receive content from different channels requiring transmission bandwidth. Furthermore, the storage capability is relative to the capabilities of the user storage apparatus in which both Ebisawa and Artigalas contain enough capacity to store content from a plurality of channels. Having more storage capacity is merely a design preference of the storing apparatus and would have been obvious for Ebisawa to incorporate having more storage capabilities as to be able to store more programming. Therefore, Artigalas and Ebisawa do not offer different solutions as they both require transmission bandwidth for transmitting simultaneously and receiving content from multiple channels and storage capabilities for storing the content. Thus, because the modification of Ebisawa in view of Artigalas for the benefit of providing the user with a more minimal waiting time and to be able to provide playback functions would be rendered appropriate and operable to one of ordinary skill in the art.

The Applicants respond:

Ebisawa and Artigalas both transmit and receive content from different channels requiring transmission bandwidth: It is true that both Ebisawa and Artigalas transmit and receive content with different channels requiring transmission bandwidth. But this statement is far to general to make any conclusions about the appropriateness of combining the references ... even walkie-talkies transmit and receive content with different channels requiring transmission bandwidth.

Furthermore, the storage capability is relative to the capabilities of the user storage apparatus in which both Ebisawa and Artigalas contain enough capacity to store content from a plurality of channels: The Applicants do not understand the "relative" statement, but would concede that both Ebisawa and Artigalas would be designed to contain enough capacity to store content from a plurality of channels. That is one of the reasons that the suggested combination of Ebisawa and Artigalas is improper. Artigalas teaches that if one wants to provide media programs to the user without delay, it should be accomplished by downloading a number of video programs in advance, and allowing the user to choose from them. This does not cause bandwidth problems, but does require a lot of storage capacity. As the Final Office Action appears to concede, one of ordinary skill in the art would simply add more storage capacity to meet the user's requirements.

Having more storage capacity is merely a design preference of the storing apparatus and would have been obvious for Ebisawa to incorporate having more storage capabilities as to be able to store more programming: The Applicants concede that one of ordinary skill in the art would design the Ebisawa appliance with enough memory to store enough to meet it's storage needs. But the Applicants also point out that Ebisawa teaches minimizing the storage requirements by pre-storing only a portion of the media program in advance.

Therefore, Artigalas and Ebisawa do not offer different solutions as they both require transmission bandwidth for transmitting simultaneously and receiving content from multiple channels and storage capabilities for storing the content: Artigalas and Ebisawa both require transmission bandwidth and storage capacities, and they both simultaneously receive content. But when considering the problem at hand .... that of providing video-on-demand within storage and transmission constraints ... they take opposite approaches and therefore indeed teach away from one another. Again, Ebisawa teaches solving the problem by pre-storing the media program, but only a portion of the media program, so as to save storage space. This solution reduces storage requirements at the cost of additional transmission bandwidth (since multiple channels are needed). Artigalas merely teaches storing different programs, each on a different channel, in their entirety. This relieves transmission requirements, but at the cost of substantially increased memory requirements. Artigalas and Ebisawa indeed offer different solutions to the VOD problem. One sacrifices storage for transmission bandwidth, and one sacrifices transmission bandwidth for storage.

Thus, because the modification of Ebisawa in view of Artigalas for the benefit of providing the user with a more minimal waiting time and to be able to provide playback functions would be rendered appropriate and operable to one of ordinary skill in the art: If one of ordinary skill in the art were in possession of the Ebisawa reference and desired a reduction in waiting time and providing playback functionality, they would follow the teaching of the Ebisawa reference. And what the Ebisawa reference teaches would be to segment the program into a larger number of shorter segments, and transmit them on a greater number of channels. This appears to be specifically taught by Ebisawa as follows:

Then, based on a control signal input from the control unit **14**, video data staggered by the time t is reproduced in the m-1 number of data transmitting units **11**$_{-n}$ to **11**$_{(n=m-2)}$. The video data after the time t is sequentially output to the m-1 number of channels staggered by the time t.

Note that, the time t and the number m divided by are set to adequate values according to the number of the usable channels, the number of the programs to be provided, the storage capacity of the data storage unit **22** of the receiving apparatus **20** mentioned later, etc.

It is also worthwhile to note that the art is crowded with video-on-demand technology, and such systems provide the proffered rationale (reducing waiting time and providing playback functionality) using techniques that are wholly different than the Applicants'. For example, VOD with minimum waiting time is provided by streaming video techniques,[1] and such techniques do not transmit the uncached data in whole segments in parallel via multiple channels. Instead, they use a single higher bandwidth channel to achieve a similar result. Further, server-based VOD systems operate entirely differently, providing the aforementioned playback functionality by issuing commands to the servers or local servers providing the media program.[2] In determining the patentability of the Applicants' invention, the prior art must be considered *as a whole*, and given the express teaching of Ebisawa to simply provide more channels and other elements of the prior art's teaching to provide higher bandwidth and/or server commands, and given Artigalas' teaching to simply cache the entire media program, the Applicants simply cannot agree that one of ordinary skill in the art would have modified Ebisawa as suggested.

2. Even When Combined, Ebisawa and Artigalas Do Not Teach the Applicants' Invention

Even if the teachings of Ebisawa and Artigalas were combined, the combination would not read on the Applicants' claimed invention. Ebisawa teaches pre-storing the first n minutes of a media program and transmitting the same program on different channels to permit near video on demand. Artigalas teaches transmitting different programs on different channels and storing them simultaneously. If one of ordinary skill in the art were to modify Ebisawa as described in Artigalas, the result would be a system in which the first n minutes of multiple media programs were

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[1] See, for example, USP 7,089,579, issued to Mao Weidong on August 8, 2006.

[2] USP 6,868,452, issued to Eager et al. on March 15, 2005 is an example of such technology.

transmitted on multiple channels for pre-storage in the receiver, not a system in which multiple channels are used to receive and store the *same* program after the program has been requested.

The Final Office Action responds:

> With regards to claim 20, applicant argues that Artigalas, while disclosing the reception of more than one channel in parallel, teaches of the programs transmitted as being different programs, thus not reading on the claimed invention since the multiple channels in the claimed invention are used to store the same program and that the combination would result in a system in which the first n minutes of multiple media programs were transmitted on multiple channels for pre-storage. The examiner realizes that such a system may result in the combination of Ebisawa and Artigalas but is not limited to only such a system.

The Examiner appears to acknowledge that Ebisawa and Artigalas can be combined to produce a system in which the first n minutes of multiple media programs are transmitted on multiple channels for pre-storage, but argues that that is not the only way that the two systems can be combined. But the question is not simply whether it is possible to combine the Ebisawa and Artigalas references in the way the Final Office Action suggests. Rather, the question is how would one of ordinary skill in the art do so, given the teaching of the Ebisawa reference and the totality of the prior art. The question is what one of ordinary skill in the art, with knowledge of the prior art (which includes the Ebisawa and Artigalas references as well as the references cited above), would solve the problem of minimizing waiting time and providing playback functionality.

The Final Office Action continues:

> Accordingly, the transmitting and storing of the same program is well-known in the art as taught by Ebisawa (See fig. 3 and col. 4 lines 11-35, which discloses transmitting a program on different channels offset by a transmission interval). Furthermore, Artigalas teaches of the reception of programs of more than one channel in parallel selected by the user. Hence, whether or not the program is the same of different programs is relative to what is being broadcast on the different channels and of what the user desires and selects. Therefore, it would have been obvious to have modified the teachings of transmitting and receiving the same program as taught by Ebisawa to incorporate reception of more than one channel in parallel as taught by Artigalas for the mere benefit of simultaneous recording of broadcasted content on several channels by which reduces the amount of time needed to store an entire single program or of several videos for simultaneous playback.

But the totality of Artigalas' teaching cannot be ignored. Artigalas also teaches the reception of *different* programs on different channels, for pre-storage of the *entire program* in advance. As the Applicants have pointed out, that is an entirely different solution to the same problem as posed by

Ebisawa. The Examiner must consider all of what the prior art teaches, not simply adopt teachings convenient to one arguing obviousness and ignore the others.

Accordingly, the Applicants respectfully traverse the rejection of claim 20 as unpatentable over Ebisawa in view of Artigalas. Claim 21 recites analogous features and is patentable for the same reasons.

With Respect to Claims 44 and 45 : Claim 44 recites:

> *An apparatus for storing a video program in response to a user demand, wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission separated in time from a preceding transmission of the video program by a retransmission interval and being transmitted on a different channel than the previous transmission, the method comprising:*
>
> *means for selecting at least one of a plurality of video programs; and*
>
> *means for receiving a plurality of time segments of the selected video program in parallel, wherein each of the time segments is received on a different one of the channels.*

Claim 44 recites features analogous to those of claim 20 and is patentable for the same reasons. Claim 45 recites the features of claim 44 and is patentable for the same reasons.

With Respect to Claims 48: Claim 48 recites:

An apparatus for providing a video program in response to a user demand, wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission temporally separated from a previous transmission by a retransmission interval and being transmitted on a different channel than the previous transmission, the apparatus comprising:

an input device for accepting a selection of at least one of a plurality of video programs for VOD service;

a tuner for receiving multiple segments of the selected video program in parallel, wherein each segment is received on one of the plurality of channels; and

a storage device, for pre-storing a first segment of the selected video program, and for storing subsequent segments of the selected video program in parallel while retrieving the pre-stored first segment of the selected video program.

Claim 48 recites a tuner for receiving multiple segments of a selected video program (not several video programs) in parallel, wherein each segment is received on one of a plurality of channels. As described above, none of the references of record disclose this feature.

With Respect to Claims 50 and 51: Claim 50 recites:

An apparatus for providing a video program transmitted in time segments on a plurality of channels in response to a user demand, comprising:

an input device for accepting a selection of at least one of a plurality of video programs for VOD service;

a tuner for receiving time segments of the selected video program in parallel, wherein each segment is received on one of the plurality of channels; and

a storage device, for storing the time segments of the selected video program in parallel wherein each of the time segments is received on a different one of the channels.

Claim 50 recites *a tuner for receiving time segments of the selected video program in parallel, wherein each segment is received on one of the plurality of channels*. As described above, none of the cited references discloses this feature. Accordingly, the Applicants respectfully traverse the rejection of claim 50. Claim 51 recites the same features as claim 50, and is patentable for the same reasons.

With Respect to Claim 52: Claim 52 recites:

A method of pre-storing a video program to be later provided in response to a user demand, wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission temporally separated from a previous transmission by a retransmission interval and being transmitted on a different channel than the previous transmission, the method comprising the steps of:

receiving and storing a first segment of a selected video program in a local storage device before accepting a user to view the video program, wherein a temporal length of the first segment is substantially equivalent to the retransmission interval; and

wherein portions of the first segment are received and stored on the plurality of channels in parallel.

As described above, none of the cited references discloses a system in which portions of a first segment are received in parallel. Accordingly, the Applicants respectfully traverse this rejection.

C. Claims 22 and 46 are patentable under 35 U.S.C. §103(a) over Ebisawa and Artigalas in view of Reynolds.

The final Office Action rejected claims 22 and 46 under 35 U.S.C. §103(a) as being unpatentable over Ebisawa in view of Artigalas as applied to claims 20 and 44, and in further view of Reynolds et al., U.S. Patent No. 6,934,963 (Reynolds). Applicants respectfully traverse these rejections for the same reasons as described above.

D. Claims 49 and 53-57 are patentable under 35 U.S.C. §103(a) over Ebisawa and Artigalas in view of Okura.

Applicants respectfully traverse these rejections for the reasons described above.

E. New Claims 58-59 are Patentable Over the Prior Art

Claims 58-59 are presented for the first time in this amendment, and are patentable over the prior art of record for the reasons described above.

VI. CONCLUSION

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers, if appropriate. Please charge all fees to Deposit Account No. 50-0383 of The DIRECTV Group, Inc., the assignee of the present invention.

Respectfully submitted,

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